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$$(1) \quad y = \Sigma A_n \cos nt + \Sigma B_n \sin nt,$$

the general solution of the differential equation

$$(2) \quad \frac{dy}{dt} + (\alpha + \beta \cos t)y = \rho \cos t,$$

where α , β and ρ are constants. Is the solution of this problem contained directly in matter which has already been published? If not, how may one proceed to the determination of the constants A_n and B_n so that (1) shall be the general solution of (2)?

2. It is clear, on the most casual observation, that the average college curriculum in mathematics is unbalanced in two respects: (1) algebra predominates over geometry, (2) analytic geometry predominates over our synthetic geometry. This reacts in two undesirable ways: (1) to deprive the college student of a rich and interesting field of study, (2) to give a very one-sided training for prospective teachers of high school mathematics. What can be done to remedy this situation?

Note.—One very interesting and thought-arousing answer is given to this question in the paper by Professor Bussey in this issue. We shall welcome discussion along this line.—MANAGING EDITOR.

NOTES AND NEWS.

· FLORIAN CAJORI, CHAIRMAN OF THE COMMITTEE.

Attention is called to questions one and two in this issue under the new department "Miscellaneous Questions," and to the introduction to this department by Professor R. D. Carmichael, who will have it in charge.

Dr. S. E. Rasor, of the Ohio State University, has been promoted to a full professorship in mathematics.

The Deutsche Mathematiker-Vereinigung held its annual meeting in Vienna on September 22-25, 1913. Altogether thirty-seven papers were presented.

Mr. George I. Gavett, University of Washington, has accepted an assistantship in the University of California for the present year.

At Lehigh University, Joseph B. Reynolds has been made assistant professor of mathematics and astronomy.

Mr. C. W. Wester, graduate student at the University of Chicago, has been appointed to an instructorship in mathematics at the University of Iowa.

At the University of Colorado the following have been appointed instructors in mathematics for the coming year: Florence Kendall, B.A., University of Colorado, 1912; W. E. Edington, B.A., Indiana State Normal, and last year a scholarship student at the University of Chicago, majoring in mathematics.

Dr. H. L. Rietz, associate professor of mathematics in the University of Illinois, has been promoted to a full professorship in the same institution. Mr. H. C. Zeis has been appointed assistant in mathematics in place of Mr. G. E. Carscallen, who accepted a professorship in Hiram College.

The Proceedings of the Fifth International Congress of Mathematicians held at Cambridge in August, 1912, have been edited by the general secretaries of the Congress, E. W. Hobson, professor of pure mathematics in the University of Cambridge, and A. E. H. Love, professor of natural philosophy in the University of Oxford.

The Proceedings appear in two volumes; price 30 shillings.

On the 25th of last May, the "friends and admirers, collaborators and students" of Professor Felix Klein presented to him his portrait, painted by Max Liebermann. The published presentation address is followed by a large number of names of mathematicians from various countries. The names of the following Americans appear in the list: M. Bôcher, F. N. Cole, P. Field, J. C. Fields, F. Franklin, A. B. Frizell, M. W. Haskell, G. A. Miller, E. H. Moore, W. F. Osgood, D. E. Smith, V. Snyder, J. H. Tanner, H. W. Tyler, E. B. VanVleck and F. S. Woods. In reply to this address Professor Klein stated that the real motive of his life had always been the collaboration with those engaged in similar work.

Professor J. F. Downey, University of Minnesota, expects to retire at the end of the present academic year. He is professor of mathematics and dean of the college of science, literature, and arts.

The Spanish Mathematical Society, which was organized at Madrid a little more than three years ago, has now 470 members, according to the July, 1913, number of *Revista de la Sociedad Matematica Española*. The membership fee for foreign members is 18 pesetas (about \$3.60) per year. Members receive without extra charge a copy of the "Revista." This elementary journal appears monthly in the Spanish language, and is published for the society by an editorial committee and the secretaries. The headquarters of the society are at San Bernardo, 51, Madrid, Spain.

The 26th fascicule of the *Encyclopédie des Sciences Mathématiques* was published on June 30, 1913. It contains 160 pages, and is devoted to partial differential equations. The first 55 pages, edited by G. Floquet of Nancy, are concerned with the study of general properties and linear equations of the first order. The remainder is edited by E. Goursat of Paris, and is devoted to non-linear equations of the first order, and to equations of a higher order.

We learn from the widow of Dr. Alexander Macfarlane, of Chatham, Ontario, that he died on August 28, 1913, after an illness of six months from valvular heart disease. He was at one time instructor in physics in the University of Edinburgh and later held the professorship of physics in the University of Texas. He had been a subscriber to the MONTHLY from the beginning, and one of its warmest supporters. Our sympathies are extended to Mrs. Macfarlane in her bereavement.

At Rutgers College, Professor Richard Morris has been given the title "professor of mathematics" in place of "professor of mathematics and graphics." Also two new appointments have been made to the rank of assistant professor, namely, Dr. W. B. Stone and Dr. S. E. Brasefield.

Announcement has been made by the department of mathematics, Adelbert College, Western Reserve University, of a course in the history and teaching of elementary mathematics for 1913-14. The course is intended especially for instructors in elementary mathematics and persons preparing to become teachers, and is open to both men and women.

The death is announced of Mr. T. N. HAAN, of Mohawk, Tenn. He was an enthusiastic supporter of the MONTHLY and was interested in mathematics especially on the practical side. He left an extensive library and a manuscript on mathematical lines which he had prepared for publication.

The mathematics section of the California High School Teacher's Association held two meetings during the Conference in Berkeley last July. At the first meeting a committee was appointed to devise means of raising the standard of scholarship throughout the state. This committee recommended that, in the larger cities, circles be formed for the study and solution of problems. Also that every teacher become familiar with at least one first class journal, such as the AMERICAN MATHEMATICAL MONTHLY, and if possible take up the study of *Mathematical Monographs*, edited by J. W. A. Young. As a result of this recommendation, the study of two or more of these monographs is included among the subjects in which examinations will be given in the university extension department of the University of California. The second meeting emphasized the need for arithmetic which concerns the investments and expenditures of daily life. It constituted a plea for more such courses in the high school to meet the future needs of the average boy and girl. Dr. HENRY W. STAGER, of the Junior College at Fresno, was elected president for the ensuing year.

As the MONTHLY is nearing the end of the first year in its new form, attention is called to the classification of articles so far published to be found on the supplementary pages of the last issue. Readers will be pleased to know that the subscription list has been nearly doubled during the year. However, this is only a beginning and the editors bespeak the coöperation of all friends in still further extending the list. An important field where such influence may be effective is in connection with school and college libraries and public libraries. Sample copies of this issue have been sent to a large number of such libraries not now on the mailing list.

It will greatly facilitate the business management if all renewals for 1914 may be received by the Treasurer before January. Please note that the date "Jan. 14," on the address label signifies the expiration of your subscription with the December issue.